IN THE SPECIFICATION

Please replace the paragraph starting on page 6, line 22 of the substitute specification with the following amended paragraph:

Furthermore, in accordance with the present invention, the above-described magnetoresistance effect element and the ~~above-described~~above-described resistance element for monitoring the lapping process have a structure wherein the elements are covered with end face protection films.

Please replace the paragraph starting on page 16, line 22 of the substitute specification with the following amended paragraph:

FIG. 4 is a graph showing a characteristic of spectral transmittance of a dichroic mirror 25. The dichroic mirror 25 ~~transmits~~ reflects 90% or more of the DUV light having a wavelength of 248 nm used for image measurement and also ~~transmits~~ reflects 95% or so of the laser light used for automatic focusing. Further, this measurement optical system 101 is constructed using a double-telecentic optical system, which generates a smaller magnification error in response to a small amount of shift in a focal position. By the way, an automatic focusing system may be a system which calculates the contrast of a pattern, the detected image itself, and fine-tunes the Z-stage 30 so that the contrast is maximized.

Please replace the paragraph starting on page 18, line 3 of the substitute specification with the following amended paragraph:

FIG. 10 is a diagram showing results of measurement of the heights of the MR elements h_{MR} and those of the resistance detector elements h_{ELG} for the row bar [[20]]2a on the wafer 1 shown in FIG. 1. Solid circles 8a represent the heights of the

MR elements h_{MR} and solid squares 9a represent the heights of the resistance detector elements h_{ELG}. A broken line 10a represents a design value of 4.7 μm and the figure indicates that measured values for each of the elements exceed the design value, respectively. Further, two large wave undulations for the heights of the MR elements h_{MR} are considered to be caused by illuminance unevenness in the exposure equipment.

Please replace the paragraph starting on page 20, line 18 of the substitute specification with the following amended paragraph:

This apparatus is composed of a measurement optical system 102, the automatic focusing system 201, the image signal processing and controlling system 301, and the stage system 401. The main difference of the present embodiment from the first embodiment is that the measurement optical system 102 is constructed by mounting oblique illumination systems 60a and 60b for detecting an image (parallel to a plane of the figure) and oblique illumination systems ~~60c and 60d~~ for detecting an image (normal to the plane, not shown in the figure) on the measurement optical system 101 of the first embodiment. Constructions and features of other components, that is, the automatic focusing system 201, the image processing and controlling system 301, and the stage system 401, are the same as in the first embodiment and, therefore, a description of these components will be omitted.

Please replace the paragraph starting on page 21, line 3 of the substitute specification with the following amended paragraph:

Each of the oblique illumination systems 60a, 60b~~, 60c, and 60d~~ is composed of a fourth harmonic generator of a semiconductor laser-pumped YAG laser and a beam forming optical system. The oblique illumination systems 60a, 60b~~, 60c, and 60d~~ emit light beams 61a, 61b having a wavelength of 266 nm, (parallel to the plane of the figure) and light beams ~~61c, 61d~~ (normal to the plane, not shown in the figure), so as to illuminate the element area on the wafer 1 obliquely from above in four directions. For example, the end faces 3c and 3d in an element height direction of the MR element on the wafer 1 shown in FIG. 6(b) are illuminated obliquely from above by the oblique illumination systems 60c and 60d, and scattered light from the stepped regions is imaged onto the CCD solid image pickup element 38 through the DUV matching objective lens 26 and the DUV imaging lens 37. The subsequent processing is the same as in the first embodiment.

Please replace the paragraph starting on page 22, line 25 of the substitute specification with the following amended paragraph:

As shown in FIG. 15, the phase modulation element 62 has an area for transmitting DUV light 68 and a quarter wavelength plate 63 in the central part thereof. Of the light reflected from the element area on the wafer 1, directly reflected light [[69]]from the whole portion of the element area is focused on a focal point on the image side through the [[DVD]]DUV matching objective lens 26 and is transformed into light 67 with a phase retarded by a quarter wavelength, because the directly reflected light [[69]]passes through this quarter wavelength plate 63.

Please replace the Abstract with the following new Abstract:

A method of measuring variation in dimensions and alignment error of thin film magnetic heads formed on a raw bar cut-off from a substrate is provided. Such method comprises illuminating a MR element and a resistance detector element which is formed for monitoring a lapping process, both of which are formed on the raw bar, with illuminating light whose wavelength is 300 nm or less; forming an image by imaging light reflected from the elements; and converting the image to an image signal through photoelectric conversion so as to detect variation in dimensions of the MR element and the resistance detector element formed on the raw bar, and alignment error between the MR element and the resistance detector element with a high degree of accuracy.